

ABSTRACT OF THE DISCLOSURE

5            A process for making functional or decorative flakes or  
platelets economically and at high production rates comprises  
applying a multi-layer sandwich of vapor deposited metal and  
release coats in alternating layers to a rotating chilled drum  
or suitable carrier medium contained in a vapor deposition  
10        chamber. The alternating metallized layers are applied by  
vapor deposition and the intervening release layers are  
preferably solvent soluble thermoplastic polymeric materials  
applied by vapor deposition sources contained in the vapor  
deposition chamber. The multi-layer sandwich built up in the  
15        vacuum chamber is removed from the drum or carrier and treated  
with a suitable organic solvent to dissolve the release  
coating from the metal in a stripping process that leaves the  
metal flakes essentially release coat free. The solvent and  
dissolved release material are then removed by centrifuging to  
20        produce a cake of concentrated flakes which can be air milled  
and let down in a preferred vehicle and further sized and  
homogenized for final use in inks, paints or coatings. In one  
embodiment the finished flakes comprise single-layer thin  
metal or metal alloy flakes or flakes of inorganic materials,  
25        and in another embodiment flakes are coated on both sides with  
protective polymeric coatings that were applied from suitable  
vacuum deposition sources or the like contained in the vapor  
deposition chamber.

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